

Having described the invention, the following is claimed:

1. A sensor assembly comprising:
  - a code wheel rotatable with a vehicle steering wheel;
  - a mechanism for indicating the number of rotations of said code wheel, said mechanism including,
    - a rotatable driven component rotatable by said code wheel;
    - said driven component being driven a predetermined portion of 360° for one revolution of said code wheel;
    - a magnet mounted on said driven component for rotation with said driven component and providing a magnetic flux field; and
    - a sensing device for sensing said magnetic flux field, said magnetic flux field varies relative to said sensing device as said driven component is rotated by said code wheel, said sensing device being operable to provide an output signal which varies with variations in said magnetic flux field.

2. A sensor assembly as defined in claim 1 wherein said magnet is shaped and positioned such that the distance of the magnet from said magnetic sensing device changes through 360° of revolution of the magnet and said magnetic sensing device senses a constantly changing magnetic field as said magnet rotates.

3. A sensor assembly as set forth in claim 1 wherein said magnet forms a spiral which extends through a turn around an axis of rotation of said driven component.

4. A sensor assembly as set forth in claim 1 wherein said magnet forms a spiral having a radially outer end portion and a radially inner end portion, said radially inner end portion of said spiral being disposed closer to an axis of rotation of said driven component than said radially outer end portion of said spiral, said sensing device being disposed further from the axis of rotation of said driven component than said radially outer end portion of said spiral.

5. A sensor assembly as set forth in claim 1 further including a first index element connected with

said code wheel and a second index element connected with said driven component, said first index element being effective to transmit force from said code wheel to said driven component to rotate said driven component.

6. A sensor assembly as set forth in claim 5 wherein said code wheel and driven component are rotatable about parallel axes.

7. A sensor assembly comprising:  
a rotatable component;  
a magnet disposed on and rotatable with said rotatable component, said magnet having an arcuate configuration with an inner end portion of said magnet disposed closer to an axis about which said rotatable component rotates than an outer end portion of said magnet; and

a sensing device which senses a magnetic flux field provided by said magnet, said sensing device being disposed further from the axis about which said rotatable component rotates than said outer end portion of said magnet.

8. A sensor assembly as set forth in claim 7 wherein said magnet forms a spiral which extends for a

turn around the axis about which said rotatable component rotates.

9. A sensor assembly as set forth in claim 7 further including a rotatable member having a drive element which cooperates with a drive element connected with said rotatable component to rotate said rotatable relative to said sensing device.